Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Part 101 of the Commission's Rules to Facilitate the Use of Microwave for Wireless Backhaul and Other Uses and to Provide Additional Flexibility to Broadcast Auxiliary Services and Operational Fixed Microwave Licensees	)	WT Docket 10-153
Request for Interpretation of Section 101.141(a)(3) of the Commission's Rules Filed by Alcatel-Lucent, Inc., et al	)	WT Docket 09-106
Petition for Declaratory Ruling Filed by Wireless Strategies, Inc.	)	WT Docket 07-121
Request for Temporary Waiver of Section 101.141(a)(3) of the Commission's Rules Filed by Fixed Wireless Communications Coalition	)	RM-11417

To: The Commission

EIBASS Reply Comments to Further Notice of Proposed Rulemaking

1. Engineers for the Integrity of Broadcast Auxiliary Services Spectrum (EIBASS) hereby respectfully submits its timely-filed reply comments to the August 9, 2011, *Report and Order, Further Notice of Proposed Rulemaking, and Memorandum Opinion and Order* (in combination, "Order") relating to flexibility for Part 74 Broadcast Auxiliary Services (BAS) stations, and other issues.

I. WSI FNPRM Comments

2. The comments to the Further Notice of Proposed Rulemaking (FNPRM) by Wireless Strategies Incorporated (WSI) indicate that it supports allowing smaller microwave antennas for fixed point-to-point links, but the real issue here is not the microwave antenna size but rather the microwave antenna electrical performance. Neither Section 74.641 of the Part 74 Subpart F TV Broadcast Auxiliary Services (BAS) rules, nor Section 101.115 of the Private Operational Fixed Service (POFS) rules, say anything about an antenna's size; rather, the criteria for whether a

microwave antenna meets FCC Category A or Category B minimum performance requirements is entirely the antenna's electrical performance, not its physical size. And this is how it should be. All that matters is the antenna's electrical performance; *i.e.*, its main beam gain, half-power beam width (HPBW), and radiation pattern envelope (RPE); *i.e.*, its side lobe suppression.

3. As stated in the intentionally early-filed September 9, 2011, EIBASS *Petition for Partial Reconsideration and FNPRM Comments*, if WSI, or any other antenna manufacturer, can develop and market a physically small microwave antenna meeting FCC Category A or Category B performance requirements, then the Commission should consider of such an antenna. However, the more outlandish the claims that a significantly smaller antenna can meet the required electrical performance, the higher and more open for review the level of proof should be. A simplistic single-page tabulation of the supposed RPE, that can be created by anyone with a word processor, should not be sufficient.

4. EIBASS notes that in the WT Docket 07-121 rulemaking pertaining to distributed radiating element (DRE) microwave antennas, initiated at the request of WSI, WSI has been uncooperative in providing credible documentation of the gain and RPE of its claimed physically small DRE antennas. To this day, EIBASS can find no evidence that such antennas are commercially available, much less any credible measurements by any party, WSI or otherwise, to support the claimed performance characteristics.

5. Far more troubling to EIBASS is the August 18, 2011, letter from OEM Communications LLC (OEMC) to the Commission, in regard to three microwave applications all involving 11 GHz Common Carrier paths of 15 to 16 km, and all specifying the "mystery" OEM OC-series antenna. As shown by the attached Figure 1, OEM indicates that it would provide the measurements only if treated as a confidential trade secret.

6. EIBASS disagrees that providing measurements on a microwave antenna, showing its gain, HPBW, and RPE, would constitute divulging a trade secret. Merely *measuring* the performance of an antenna is separate from divulging how an antenna is constructed or manages to achieve its performance.

7. Based on WSI's April 6, 2011, *ex parte* filing to this rulemaking, it would appear that WSI and OEMC are one and the same, or that the two organizations are at least closely related. See the attached Figure 2. That WSI filing was attempting to rebut an allegation by Comsearch that the OEM microwave applications discussed in paragraph five were improper applications whose true purpose was to "block" future microwave applications, thus paving the way for WSI's WT

Docket 07-121 proposal for "auxiliary" microwave stations. WSI claimed that the Comsearch filing was a "diversionary" tactic. However, the WSI filing demonstrates that WSI and OEMC are hand-in-glove organizations, and that it is the WSI filing that is the true diversionary tactic.

8. Carl Sagan's "extraordinary claims require extraordinary evidence"[1] policy applies perfectly here: WSI/OEMC have made extraordinary claims (see the attached Figure 3), yet have failed to provide any proof, let alone extraordinary proof, that its claimed physically small distributed radiating element microwave antenna meets Category A, or even Category B, requirements. Or, for that matter, any proof that the antenna exists anywhere except in WSI/OEMC claims.

9. Thus, EIBASS reiterates that in this case, the Commission should use its regulatory authority to require WSI/OEMC to provide credible third-party measurements of its claimed Model OC-11200B microwave antenna. Such third-party need not be privy to how the antenna achieves its performance; the third-party need only independently certify the electrical performance. Photographs of the antenna (external only) might also be appropriate, to prove that the antenna really does exist.

II. Comsearch FNPRM Comments

10. EIBASS agrees with all of the Comsearch FNPRM comments. EIBASS particularly appreciates that Comsearch also realizes that it is an antenna's electrical performance, and not its physical size, that matters.

III. Summary

11. WSI/OEMC are, in EIBASS' view, attempting at best to produce the equivalent of cold fusion from science, and at worst Bernard Madoff investment strategies from finance. WSI/OEMC have been given multiple opportunities to provide credible evidence of their extraordinary claims, yet have consistently failed to do so. EIBASS hopes that the Commission will apply ample doses of engineering and regulatory common sense when evaluating the WSI/OEMC claims.

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[1] The "Sagan Standard" appeared in the 1980 award-winning PBS Cosmos series, Chapter 12, "Encyclopedia Galactica," at 1:24 minutes in.

IV. List of Figures

12. The following figures or exhibits have been prepared as a part of these WT Docket 10-153 FNPRM reply comments:

1. August 11, 2011, OEM Communications letter
2. WSI = OEM figure
3. OEM Communications claimed microwave antenna performance.

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OEMcommunications LLC

August 18, 2011

Via Electronic filing

Marlene H. Dortch, Secretary
Federal Communications Commission
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Washington, D.C. 20554

RE: OEM Communications LLC
Common Carrier Fixed Point-to-Point Microwave Applications filed on July 6, 2011 (File Nos. 0004792571, 0004792606, 0004792617).

OEM Communications submits this reply in response to the Comsearch letter of August 9, 2011 in which it asks the Commission to "…consider the technical matters addressed above in its evaluation of the above-referenced applications."

Comments:

(1) Rule 101.103 (d) (2) (iv) states:

> *"Any response to notification indicating potential interference must specify the technical details and must be provided to the applicant in writing, within the 30-day notification period."* [emphasis added]

The Comsearch letter of June 28, 2011 not only did not meet the technical-details requirements of Rule 101.103 (d) (2) (iv), but was also untimely. Furthermore, Comsearch did not submit a request for extension of time or waiver of the Commission's rules in conjunction with the untimely response. Thus, Comsearch's letter is untimely and must be dismissed.

(2) OEM has certified that the antenna meets the Category B requirements of Rule 101.115, yet Comsearch is further asking OEM to "… justify that the antenna actually would meet the claimed Category B performance…" by divulging trade secret information. The Comsearch request is contrary to Section 157(a) of the Communications Act which states:

> *"Any person or party who opposes a new technology or service proposed or permitted under this Act shall have the burden to demonstrate that such proposal is inconsistent with the public interest…"* [emphasis added]

OEM would welcome an opportunity to disclose its trade secret information to the Commission.

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OEMcommunications LLC

(3) A radio frequency study was performed by Wireless Applications Corporation and no interference problems were indicated. Further, within the 30-day notice period clearance notices were received from both Micronet and Radyn. In addition, not a single one of the other spectrum management companies presented any concern regarding harmful interference or that the sum of the interfers gave a negative interference margin. Finally, three separate Comsearch engineers sent clearance notices on all four paths. To this day Comsearch corporate has not presented any evidence to show that the findings of no harmful interference by the Comsearch engineers were wrong.

While it's unnecessary in light of the above, please find attached a point-by-point response to the "technical matters" listed in Comsearch's letter of August 9, 2011. OEM would be pleased to answer any questions the Commission might have.

In consideration of all of the above, OEM respectfully asks the Commission to expeditiously process the Applications filed on July 6, 2011 by OEM Communications LLC (file Nos. 0004792571, 0004792606, 0004792617).

Respectfully submitted,
OEM Communications LLC

Graham R Stone

President

from April 6, 2011, WSI ex parte filing to WT Docket 10-153

The OEM Communications LLC Diversion

Comsearch, in their ex parte presentation of March 11, 2011, included reference to a PCN issued on behalf of OEM Communications LLC ("OEM") on October 15, 2010 on the incorrect assumption that OEM was planning a primary network that could be used with auxiliary stations and that OEM planned to "block" future applicants by using excessive EIRP levels of 84.7dBm.

Comsearch's assumption regarding the planned use of auxiliary stations is false, as is their statement that EIRP that has the potential to block New Applicants and that OEM plans to use an EIRP of 84.7dBm.

The facts are that OEM plans to use a single 11GHz channel pair in a hub and spoke configuration with Cat A smart antennas at the hub, and CAT B antennas at licensed stations at the spokes. The PCNs show a maximum EIRP of 62dBm, less than the national average EIRP of 68dBm

The fact is, OEM is putting to productive use innovative technologies necessary to meet the goals of the National Broadband Plan. Comsearch and others are trying to stifle innovation.

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OEM Communications Claimed Microwave Antenna Performance

OEM Communications LLC

Smart Adaptive Antenna System

Model Number	OC -1100A
Frequency	10700 - 11700MHz
Regulatory Compliance	FCC Part 101.115(b), Category A
Polarization	Vertical/Horizontal
Interface	WR-75
Return Loss dB	20
Main Lobe Beamwidth, deg.	2.20
Gain dBi	
10700MHz	39.00
11200MHz	39.30
11700MHz	39.60

Radiation Pattern Envelope

Angle Degrees	V/V dB	V/H dB	H/H dB	H/V dB
0.00	0.00	-30.00	0.00	-30.00
0.50	-0.40	-30.00	-0.40	-30.00
1.10	-3.00	-30.00	-3.00	-30.00
2.00	-8.08	-30.00	-8.08	-30.00
3.00	-13.72	-30.00	-13.72	-30.00
4.00	-19.36	-45.00	-19.36	-45.00
5.00	-25.00	-45.00	-25.00	-45.00
10.00	-25.00	-45.00	-25.00	-45.00
10.00	-29.00	-45.00	-29.00	-45.00
15.00	-29.00	-50.00	-29.00	-50.00
15.00	-33.00	-50.00	-33.00	-50.00
20.00	-33.00	-54.00	-33.00	-54.00
20.00	-36.00	-54.00	-36.00	-54.00
30.00	-36.00	-55.00	-36.00	-55.00
30.00	-42.00	-55.00	-42.00	-55.00
100.00	-42.00	-55.00	-42.00	-55.00
100.00	-55.00	-55.00	-55.00	-55.00
180.00	-55.00	-55.00	-55.00	-55.00

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